

Ivan Iwannado



Ivan Iwannado knows what he wants to do, but like most of us he'll take a while to figure out how to do it. Learn from his mistakes

THIS MONTH:

IVAN TRIES GEOCACHING

Ivan Iwannado was out hiking at the weekend when he met a group of people wandering around with a bright yellow gadget that looked like a pocket calculator. They got talking and told Ivan that the gadget was a GPS and they were hunting for treasure. They claimed it's really popular and you can use your computer to help.

Ivan quite fancies the idea of finding buried treasure using his computer, but are these blokes telling the truth?

Well, sort of, but the treasure tends to be toy cars or yo-yos. The people were going geocaching.

Shucks, Ivan was hoping for doubloons, Celtic torcs or something exciting like that. What's geocaching?

Geocaching uses global positioning system (GPS) receivers. These are small devices that you can use to pinpoint your position in the world to within a few metres. GPS is a satellite-based navigation system made up of a network of 28 satellites that were placed into orbit by the US Department of Defense. The satellites orbit the earth twice a day, and GPS receivers take this information and use it to calculate your location.

Geocaching is a bit like a treasure hunt, where people hide a 'treasure' cache somewhere, and put its details on a website. Other people then try to find the cache using their GPS receivers.

What's in it for the people hiding the caches?

The fun of reading who has visited their cache. Every time you visit a cache, you sign a visitors' book, and can optionally take an item from the cache and replace it with something different. It's considered good manners to leave something if you take something, so that the cache's contents changes over time.

Ivan can see that it might be fun to go treasure hunting. How can he take part?

By joining one of the online groups who organise the caches. The biggest and best-known is www.geocaching.com, and Ivan can sign up and



start pretty much straight away. It doesn't cost anything, and there's lots of help on the site.

Isn't it all a bit simple if you have a GPS receiver that guides you directly to the site?

It's usually a bit more complicated than that. The caches are often quite well hidden, and you need to follow clues to work out exactly where they are. Some are in quite inaccessible places such as halfway up a mountain, or even underwater. And some caches involve finding clues at several different sites.

What else could Ivan do with his GPS?

Well, not get lost on walks for a start. It can also be fun to take your GPS with you on a walk or bike ride and, when you get back to your computer, download the information it's gathered. You'll see your route being plotted on the map onscreen, which can be an illuminating experience.

Nigel Knowitall muttered something about finding confluences as well. What's that all about?

This is a slightly more sophisticated project in which people are trying to visit every place on earth where lines of latitude and longitude cross – that's a confluence. The Degree Confluence Project's website is at www.confluence.org. The idea is that people visit the confluences and take digital photographs of them all. Most of the accessible ones have already been visited, but it's still fun to add your own photograph and a write-up of your visit. Ivan could even start his own personal log.

Ivan's had a look on the geocaching site, and there are some caches quite close to where he lives. One of them mentioned a travel bug. What's that?

Some geocachers put a small item attached to a special tag into a cache, along with details of what they want the item to do. For example, currently someone has a toy Land Rover that started in the Czech Republic with instructions that they'd like it to visit Longbridge, where the real Land Rovers are made, before travelling back to its original home. If you find a travel bug in a cache and can help it on its mission, you move it on to another cache in the right direction. You log what you've done on a special page on the geocaching website, and can read how any of the travel bugs are doing.

Ivan can see that his kids would think that was fun, and it might teach them a bit of geography if he came up with the right mission. Now he's sold on the idea and he's going to buy a GPS – what should he look for?

One that's cheap and has a data cable so he can download information to and from his PC. It needs to be cheap so he won't cry when he drops and breaks it, and the data cable is necessary so he can make use of the online information. Other than that, it should be able to store waypoints, which are the places on the map that Ivan needs to get to, such as turns in the track.

A good GPS would store lots of waypoints, but Ivan could get away with anything over 10 for geocaching. To ensure a good reception, so he can work out where he is with optimum accuracy, Ivan should look for a 12-channel parallel receiver system. Then he should look at the battery life so he's not forever running out of power, and ideally find a waterproof model. Ivan's bound to drop it in a stream at some point, and Britain also has this phenomenon called rain.

Ivan is a happy man. He's bought a cheap GPS and is planning lots of family outings to wild and wonderful places, with the promise of hidden treasures to motivate the kids. 

Nigel Knowitall

If you want to get something done using software but are unsure how to do it, fear not — help is at hand from our resident expert, Nigel Knowitall



MAPPING A COLON TO THE NUMERIC KEYPAD IN EXCEL

Q I am a member of an athletics club and I use Excel to record the results of races. I would like to be able to type in a cross-country runner's finishing time using the numeric keypad on the right-hand side of the keyboard only. The format is mm.ss.t so that 43.36.2 means 43 minutes, 36.2 seconds.

I would also like to be able to subtract two times recorded in this way. It would seem that you have to use a colon rather than a decimal point, but there isn't a colon on the numeric keypad so it takes longer to type.

Is it possible to map the decimal point on the numeric keypad as a colon? Or is there a way of subtracting times that have been keyed using a decimal point instead of a colon?

Ray Morgan

A We haven't found a way to map a colon to the numeric keypad, nor to add a time format using the decimal point. However, you can add a couple of calculated columns that take the time as you enter it on the numeric keypad and convert that into a 'standard' time. Your example is complicated by the fact that not only do

Start	Finish	Start	Finish
10:30.2	15:35.3		15:35.3
9:30.2	13:45.1	9:0.	9:30.2
10:30.2	12:35.3	10:30.2	10:30.2
10:30.2	13:05.2	10:30.2	13:05.2
09:12.3	11:50.2	09:12.3	11:50.2
11:23.1	13:59.2	11:23.1	13:59.2

You can use MID to split the time into minutes, seconds and tenths of seconds

you want to enter a time in a non-standard format in terms of the separators, but your time is non-standard because of the decimal partial seconds.

If you know that the times are always entered as mm.ss.t, you can achieve the result you want using text-manipulation formulae. We'll start with a way that uses the most basic Excel formulae so the method is applicable no matter what spreadsheet you're using, then show an alternative method that uses more sophisticated Excel functions.

We'll assume the start time is entered in column A and the end time in column B. In column C, we'll

Finish	Start1	Finish1	Diff	Start2
15:35.3	10:30.2	15:35.3	05:05.10	10:30.2
13:45.1	9:0.	9:30.2	#VALUE!	
12:35.3	10:30.2	10:30.2	00:00.00	10:30.2
13:05.2	10:30.2	13:05.2	02:35.00	10:30.2
11:50.2	09:12.3	11:50.2	02:37.90	09:12.3
13:59.2	11:23.1	13:59.2	02:36.10	11:23.1

But REPLACE is more tolerant of times that are entered with missing digits and will not give the 'Value' error

convert the non-standard time from column A into a standard time. So if the first time were entered in row 3, in cell C3 you'd have the formula:

```
=LEFT(A3,2)&" "&MID(A3,4,2)&" "&MID(A3,7,2)
```

In other words, take the leftmost two characters (which contain the minutes), then add a colon. Next, take the two characters starting at character four in the original time. This will give the seconds. Add a dot and, finally, take the characters starting at position seven to get the decimal partial seconds. This will take a time entered as mm.ss.tt and convert it to mm:ss.tt.

Excel will recognise this as a valid time if you use mm:ss.00 as the format for the cell. You then do the same thing for column B, with a formula in column D reading:

```
=LEFT(B3,2)&" "&MID(B3,4,2)&" "&MID(B3,7,2)
```

Then in column E, you can subtract cell C3 from cell D3. Format column E as a custom time format of mm:ss.00, and you should see the result you want. All this works fine as long as you always enter the original times as mm.ss.t.

If you get a time such as 09:04.10 and try to save typing by entering it as 9.4.1, the formula fails because it incorrectly assumes that the minutes and the seconds each have two characters. To overcome this, you either need to be disciplined in the way you enter your data, or use a different formula that employs two other Excel functions, Find and Replace. For example, to convert the time entered in cell A3 no matter how many minutes were entered, you would use:

```
=REPLACE(A3,FIND(".",A3),1,".")
```

It's best to look at this in two parts, starting with the inner portion. Find is an Excel function that

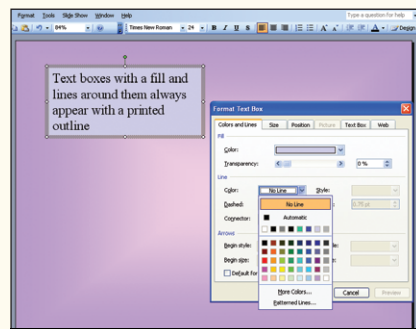
REMOVING BORDERS FROM TEXT BOXES

Q When I print my PowerPoint slides, I have a problem with any slide that has a text box on it. The box always appears with a printed border, despite the fact that I have selected No Line for the border when designing the slide. I know the border has been set correctly because it doesn't show on Print Preview. What's going on? I'm using PowerPoint 2002 with all the service packs.

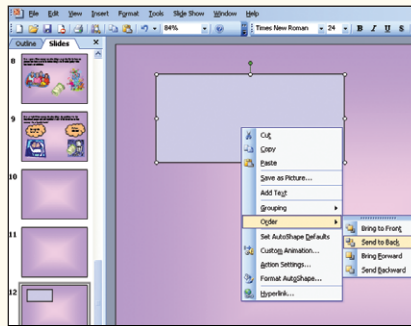
Charles Henderson

A This is a feature of PowerPoint. If you are printing in black and white, any text boxes that have a fill effect will indeed appear with a printed border, no matter how you try to format them with no borders, or borders the same colour as your background.

As far as we know, the only way to avoid the problem is to put a filled autoshape behind the text box, then take the fill away from your text box.



Text boxes with fill effects always print with a line around the box



The solution is to remove the fill from the text box and add a filled autoshape behind the box



REMOVING WORD'S ANNOYING CHECKS

Q There is one feature in Word 2000 that drives me to distraction. When I run a spelling and grammar check, or find and replace text in a selected section of a document, the program offers to check the rest of the document. If I select a section, with the aim of replacing text in the defined section only, why do I have to decline the option of checking the remainder of the document?

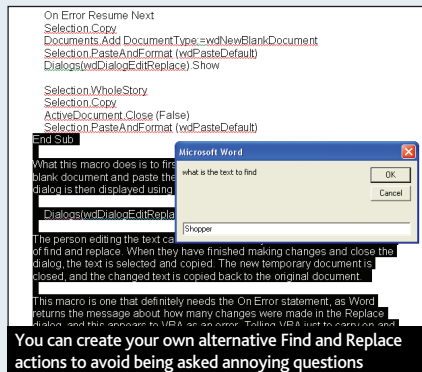
Do Microsoft's programmers believe that the average user is too dumb to work out what he wishes to check for himself? If there is a workaround for this, please let me know before I dump Word and try OpenOffice.

Steve Proud

A We haven't found a simple workaround for this. Can any readers suggest an easy way to stop Steve being driven to distraction, such as by setting an option in Word? The only possible solution we can offer is to use some VBA macros, which seems a bit heavy-handed. However, they at least achieve the results you want. The first macro performs a spelling and grammar check on the selected text:

```
Sub ivan215()  
    Set myrange = Selection.Range  
    If Options.CheckGrammarWithSpelling = True Then  
        myrange.GrammarChecked = False  
        myrange.CheckGrammar  
        myrange.CheckSpelling  
    Else  
        myrange.CheckSpelling  
    End If  
End Sub
```

This checks the spelling of only the selected text and does not offer to continue with the rest of the document. In theory CheckGrammar should



check the spelling as well as the grammar, but when I tested this with Word 2003 it didn't bother checking the spelling, hence the requirement to have the CheckSpelling method also invoked.

The equivalent for Find and Replace is less appealing. You can show Word dialog boxes in macros, but it then goes its own sweet way and asks whether you want to check the rest of the document. The problem is that, while the CheckSpelling and CheckGrammar methods can be applied to a Range object, and so to a part of the selected text, the Find and Replace dialog can only be applied to an entire document. We could think of only two ways around this: create your own, less elegant solution based on two input boxes, or copy the selection temporarily to a new document and do the Find and Replace operation there.

The first option, using two input boxes, looks something like this:

```
Sub ivan215a()  
    Set myrange = Selection.Range  
    myfind = InputBox("what is the text to find")  
    myreplace = InputBox("and what should it be replaced with")  
    myrange.Find.Execute findtext:=myfind, replacewith:=myreplace  
End Sub
```

This asks the user for the text to find, then the text that it should be replaced with, and does the replacement on the text in the selected range.

The next version is more complicated, but gives you the full power of the Find and Replace dialog:

```
Sub ivan215b()  
    On Error Resume Next  
    Selection.Copy  
    Documents.Add DocumentType:=wdNewBlankDocument  
    Selection.PasteAndFormat (wdPasteDefault)  
    Dialogs(wdDialogEditReplace).Show  
    Selection.WholeStory  
    Selection.Copy  
    ActiveDocument.Close (False)  
    Selection.PasteAndFormat (wdPasteDefault)  
End Sub
```

This macro copies the current selection, opens a new blank document and pastes the new selection into it. The Find and Replace dialog is then displayed using:

```
Dialogs(wdDialogEditReplace).Show
```

The person editing the text can do whatever they want with this text in terms of find and replace. When they have finished making changes and close the dialog, the text is selected and copied. The new temporary document is closed, and the changed text is copied back to the original document.

This macro definitely needs the On Error statement, as Word returns the message about how many changes were made in the Replace dialog, and this appears to VBA as an error. Telling VBA just to carry on and ignore the error isn't always a good idea, but in this case it gets around the problem quite neatly.

rt	Finish	Start1	Finish1	Diff	Start2	Finish2
30.2	15.35.3	10:30.2	15:35.3	05:05.10	10:30.2	15:35.3
0.2	13.45.1	9.0.	9:30.2	#VALUE!	9:30.2	13:45.1
30.2	12.35.3	10:30.2	10:30.2	00:00.00	10:30.2	12:35.3
30.2	13.05.2	10:30.2	13:05.2	02:35.00	10:30.2	13:05.2
12.3	11.50.2	09:12.3	11:50.2			
23.1	13.59.2	11:23.1	13:59.2			

Whichever formula you choose, you need to format the cells as a custom time format of mm:ss.00

tells you the position of one character string within another. So a search for =FIND("op","Shopper") would return 3, which is where the string "op" starts within the string "Shopper".

You can alter where Find starts looking by adding a start position, so that =FIND("op",

"Shopper", 2) would start looking at position two within the string "Shopper". We're looking for the string "." within cell A3, using =FIND(".",A3).

This tells us where the first decimal point is located in the time entered in cell A3. To replace that with a colon, we use the Replace function. This changes part of the text in one string with different text. So, if we had =REPLACE("Shopper",2,2,"k"), it would change Shopper to Skipper.

We want to replace the first decimal point in the time with a colon. The start position for the replacement text is the location of the first decimal point, which we can locate using the Find function. We want to replace one character with a colon. Put all this together, and you end up with:

```
=REPLACE(A3, FIND(".", A3), 1, ":")
```

If you replicate this formula for the appropriate cells in columns C and D, the time will be correctly converted no matter what format it is entered in.

FEEDBACK: NUMBER PROGRESSION



In *Shopper* November 2005, you showed a way to set up a number format that includes a character in the middle of the digits.

An alternative, simpler way to achieve the desired display and the ability to drag fill is to use the custom format 0"z00". The cells can then contain the values 60000, 60001, 60002 and so on, but will appear as 60000z00, 60001z00, 60002z00.

Colin Lamb

CONTACT

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